Claim Listing   This listing of claims will replace all prior versions and listings of

claims in the application:

1 - 63:   (cancelled)

64.   (currently amended) An ~~An~~ pET-type expression vector

optimized for use in E. coli cells comprising a first

nucleic acid sequence encoding a peptide extension ~~for~~

~~enhancing the solubility and proper folding of a protein or~~

~~polypeptide of interest~~, wherein the encoded peptide

extension is selected from the group consisting of: Peptide

T7C (SEQ ID NO: 5), Peptide T7B (SEQ ID NO: 6), Peptide

T7B1 (SEQ ID NO: 7), Peptide T7B2 (SEQ ID NO: 8), Peptide

T7B3 (SEQ ID NO: 9), Peptide T7B5 (SEQ ID NO: 11), Peptide

10 T7B6 (SEQ ID NO: 12), Peptide T7B7 (SEQ ID NO: 13), Peptide

T7B8 (SEQ ID NO: 14), Peptide T7B9 (SEQ ID NO: 15), Peptide

T7B10 (SEQ ID NO: 16), Peptide T7B11 (SEQ ID NO: 17),

Peptide T7B12 (SEQ ID NO: 18), Peptide T7B13 (SEQ ID NO:

19), Peptide T7A1 (SEQ ID NO: 21), Peptide T7A2 (SEQ ID NO:

22), Peptide T7A3 (SEQ ID NO: 23), Peptide T7A4 (SEQ ID NO:

24) and Peptide T7A5 (SEQ ID NO: 25), the expression vector

further comprising a multiple cloning site in which a

second nucleic acid sequence encoding ~~said~~ a protein or

polypeptide of interest, having a carboxyl- and an amino-

20 terminus, is inserted in-frame with said first nucleic acid

sequence, wherein expression of the first and second

nucleic acid sequences yields a fusion protein consisting

of the encoded peptide extension fused to the carboxyl-

terminus of the protein or polypeptide of interest.

65 - 98: (cancelled)

99. (currently amended) A̶n̶ pET-type E. coli expression

vector for enhancing the solubility and proper folding of

an encoded protein or polypeptide of interest, which

protein or polypeptide comprises an amino and a carboxyl

terminus, said vector comprising a first nucleic acid

sequence encoding a peptide extension, which peptide

extension is selected from the group consisting of: Peptide

T7C (SEQ ID NO: 5), Peptide T7B (SEQ ID NO: 6), Peptide

T7B1 (SEQ ID NO: 7), Peptide T7B2 (SEQ ID NO: 8), Peptide

10 T7B3 (SEQ ID NO: 9), Peptide T7B5 (SEQ ID NO: 11), Peptide

T7B6 (SEQ ID NO: 12), Peptide T7B7 (SEQ ID NO: 13), Peptide

T7B8 (SEQ ID NO: 14), Peptide T7B9 (SEQ ID NO: 15), Peptide

T7B10 (SEQ ID NO: 16), Peptide T7B11 (SEQ ID NO: 17),

Peptide T7B12 (SEQ ID NO: 18), Peptide T7B13 (SEQ ID NO:

19), Peptide T7A1 (SEQ ID NO: 21), Peptide T7A2 (SEQ ID NO:

22), Peptide T7A3 (SEQ ID NO: 23), Peptide T7A4 (SEQ ID NO:

24) and Peptide T7A5 (SEQ ID NO: 25), a multiple cloning

site in which a second nucleic acid sequence encoding the

protein or polypeptide of interest is inserted in frame

20   with said first nucleic acid sequence, and wherein

expression of the first and second nucleic acid sequences

under physiological conditions yields a fusion protein

consisting of the encoded peptide extension fused to the

carboxyl terminus of the protein or polypeptide of

interest.

100. (cancelled)